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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/546,626	07/27/2006	Karl Martin Ribbeck	1053-0001WOUS	3283

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EXAMINER
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GATES, ERIC ANDREW

ART UNIT	PAPER NUMBER
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3726

MAIL DATE	DELIVERY MODE
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06/01/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/546,626	<b>Applicant(s)</b> RIBBECK, KARL MARTIN	
	<b>Examiner</b> ERIC A. GATES	<b>Art Unit</b> 3726	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 19 March 2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 16-22 and 24-30 is/are pending in the application.  
4a) Of the above claim(s) 16-19 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 20-22 and 24-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 March 2009 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. This office action is in response to Applicant's amendment filed 19 March 2009.

#### ***Drawings***

2. The drawings were received on 19 March 2009. These drawings are objected to as set forth below.
3. Figures 12 and 14a should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

#### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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5. Claims 20, 21, 24, 27, 28, and 30 are rejected under 35 U.S.C. 102(b) as being anticipated by Wildhaber (U.S. Patent 1,667,299).

6. Regarding claim 20, Wildhaber discloses a profile-sharpened or profile-sharpened and additionally form-ground bar cutting blade 11 for milling spiral bevel gears and hypoid gears (see page 1, lines 12-19, and page 2, lines 87-91) comprising: a shank 17 with a cutting edge profile 18 formed at one end of the shank by the intersection of at least one rake surface 19 or 19', at least two flat clearance surfaces 20 (the sides may be straight or curved, see page 2, lines 82-83) and at least one top surface 22, said cutting edge profile including, for producing a tooth slot, a first cutting edge 24 for a first tooth flank, a second cutting edge 24 (on the other side of surface 19 as seen in figure 4) for at least a portion of the second tooth flank opposite said first tooth flank, and a top cutting edge 25 for at least a portion of the bottom of the tooth slot, and wherein the first and second cutting edges are adapted to completely cut the first and second tooth flanks respectively, and that the top cutting edge is adapted to completely cut the bottom of the tooth slot, thus enabling the tooth slot to be generated to a final geometry using one bar cutting blade in one milling pass (see page 2, lines 63-79), and wherein the first and second cutting edges define rake angles that are not both zero degrees (as seen in figure 6).

7. Regarding claim 21, Wildhaber discloses wherein the cutting edge profile is formed by the intersection of one rake surface 19 with at least the two clearance surfaces 20 and the top surface 22.

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8. Regarding claim 24, Wildhaber discloses wherein the first and second cutting edges have rake angles greater than about zero degrees (as seen in figure 6).
9. Regarding claim 27, Wildhaber discloses wherein the rake surface 19 is worked into the shank (as seen in figure 4).
10. Regarding claim 28, Wildhaber discloses wherein the rake surface 19' between the first and second cutting edges is curved in a concave configuration (as seen in figure 6).
11. Regarding claim 30, Wildhaber discloses wherein the bar cutting blade is mountable in an end face of a cutter head 10 on a circle and wherein a cutting end of the shank protrudes from the end face of the cutter head (as seen in figure 2).

***Claim Rejections - 35 USC § 103***

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wildhaber in view of Iizuka et al. (U.S. Patent Publication 2001/0028831 A1).
14. Regarding claim 22, Wildhaber discloses the invention substantially as claimed, except Wildhaber does not disclose wherein the cutting edge profile is formed by the intersection of two relatively angled rake surfaces with at least the two clearance surfaces and the top surface. Iizuka et al. teaches the use of a cutting blade 200 that

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has two cutting edges 203/205, a top surface 110, and a rake surface formed of two relatively angled rake surfaces 204/206 for the purpose of facilitating the removal of cutting chips produced in the cutting operation. Therefore it would have been obvious to one skilled in the art at the time of the invention to have combined the blade of Wildhaber with the angled rake surfaces of Iizuka et al. in order to have a tool that more effectively cuts the workpiece.

15. Claims 25 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wildhaber in view of Stadtfeld (U.S. Patent 5,944,587).

16. Regarding claims 25 and 26, Wildhaber discloses the invention substantially as claimed, except Wildhaber does not disclose wherein the first and second cutting edges have rake angles smaller than about zero degrees in either case, or wherein the first and second cutting edges have rake angles one of which is greater than about zero degrees and the other of which is smaller than about zero degrees. Stadtfeld teaches the use of a cutting blade 2 comprising a cutting edge 18 that is formed at a rake angle of between -20 and +20 degrees for the purpose of design choice. Therefore it would have been obvious to one skilled in the art at the time of the invention to have combined the blade of Wildhaber with the desired rake angles as taught by Stadtfeld in order to have a cutting blade that has cutting edges that are formed at the optimum desired rake angles.

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17. Claim 29 is rejected under 35 U.S.C. 103(a) as being unpatentable over Wildhaber in view of Kotthaus (U.S. Patent 3,760,476).

18. Regarding claim 29, Wildhaber discloses the invention substantially as claimed, except Wildhaber does not distinctly disclose wherein for form-grinding the bar cutting blade at least one rake surface is a rake surface to be reground. Kotthaus teaches in the background of the invention that it is well known to regrind the rake surface (cutting face) of a bar tool bit, which is well known in the art to be done for the purpose of resharpening the cutting surfaces. Therefore it would have been obvious to one skilled in the art at the time of the invention to have combined the blade of Wildhaber with the teaching of Kotthaus in order to have a rake surface that is reground to resharpened the cutting surfaces.

### ***Response to Arguments***

19. Applicant's arguments filed 19 March 2009 have been fully considered but they are not persuasive.

20. Applicant's argument that "Wildhaber fails to disclose, teach, or suggest a cutting blade comprising a shank with a cutting edge profile defined in part by first and second cutting edges that enable the tooth slot to be generated to a final geometry using one bar cutting blade in one milling pass, as is recited in amended claim 20. The cutting blade of Wildhaber is used as a finishing tool, or it can rough out and finish cut in consecutive steps." is not persuasive. Wildhaber teaches that each cutting blade simultaneously takes a finishing cut using both sides of the cutting blade, and that the

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cutter can furthermore be used to rough cut and finish cut. Wildhaber does not teach that multiple passes are required. That only one cut is required is further evidenced in Wildhaber's statement that "the tool might be a face hobbing cutter in which the blades are so arranged as to cut in successive tooth spaces of the blank".

21. Applicant's argument that "Wildhaber fails to disclose, teach, or suggest a cutting blade comprising a shank with a cutting edge profile having first and second cutting edges defining rake angles ( $Y_{sx}$  and  $Y_{sv}$ ) that are not both zero degrees, as is recited in amended claim 20." is not persuasive. It is the embodiment of figure 6, not figure 5, that was used to teach rake angles that are not zero degrees.

22. Applicant's argument that "Wildhaber further fails to disclose, teach, or suggest a cutting blade comprising a shank with a cutting edge profile formed at one end of the shank by the intersection of at least one rake surface, at least two flat clearance surfaces, and at least one top surface, as is recited in amended claim 20." is not persuasive. The sides of the cutting surface may be straight or curved, see page 2, lines 82-83, and an embodiment with straight sides will form flat clearance surfaces.

23. For the reasons as set forth above, the rejections are maintained.

### ***Conclusion***

24. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.



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Any inquiry concerning this communication or earlier communications from the examiner should be directed to ERIC A. GATES whose telephone number is (571)272-5498. The examiner can normally be reached on Mon-Thurs 8:45 - 6:15.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Bryant can be reached on (571) 272-4526. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Eric A. Gates/  
Examiner, Art Unit 3726  
27 May 2009